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Pass the Whole-Grain Snack Food, Please

Eaten any whole-grain foods lately? Perhaps some whole-grain cereal for breakfast or whole-grain bread with your dinner? If you are the average consumer, the answer is no. The American Heart Association, the *Dietary Guidelines for Americans*, and *Healthy People 2010* all recommend that consumers choose a variety of grains, including whole grains, and that they consume at least six grain servings each day. Half of those grain servings should be whole grains. An effort has been launched to convince consumers that "3 are key" when it comes to whole grains. In the United States, we have no problem consuming more than six grain servings each day, but less than one of these servings is a whole-grain product.

Your response may be "Who cares? I know whole grains provide dietary fiber, but so do other foods. And it is easy to get dietary fiber as a supplement." But whole grains provide much more than dietary fiber, including vitamins, minerals, and phytochemicals that function as nutrients, antioxidants, and phytoestrogens. Whole-grain consumption reduces risk of certain cancers, stroke, diabetes, and cardiovascular disease.

Sure, whole grains like oats contain soluble fiber, but the protection seen with whole-grain consumption is much greater than we would predict from the soluble fiber content alone. The whole is greater than the sum of the parts. Even when we look at all the parts of whole grain that we know protect against heart disease—vitamins, minerals, soluble fiber, stanols, etc.—the protective effect of whole-grain intake is greater than the sum of the protection seen with all the pieces.

Consumption of a whole-grain diet compared to a refined-grain diet in a clinical setting has been shown to improve serum health markers and help participants lose weight. Whole-grain products require more chewing and have a higher satiety index than refined grains.

So if whole grains are so great, why hasn't the word reached consumers? In the American Dietetic Association's 2000 Trends Survey, 85% of consumers said diet and nutrition were important to them personally, but only 29% said they were able to make significant changes in their diet. Consumer surveys find that the whole-grain message is out there, especially since the Food and Drug Administration's 1999 approval of a health claim for whole grains: "Diets rich in whole grains and other plant foods that are low in total fat, saturated fat, and cholesterol may reduce the risk of heart disease and some cancer."

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Despite interest in whole grains by consumers, barriers to whole-grain consumption are cited in surveys. First, consumers can't recognize a whole-grain food. Consumers think all whole-grain foods are dark in color and taste bad. An oat-based product, for example, is never perceived as a whole-grain product, even though it can be. Other barriers described by consumers include price, softness (or lack thereof), texture, dryness, and poor taste. Consumers say they would purchase and consume whole-grain products if they were not too expensive and were convenient.

So why haven't food processors stepped forward to give consumers what they want? Whole grains present multiple challenges for the food processor. Although the health claim was successful in promoting whole

grains, it is difficult for processed food other than cereals to meet the whole-grain health claim requirements. To qualify for the health claim, the food must contain 51% whole-grain ingredients. Bread bakers find that they can put in up to 25% of whole grains by weight of the flour, but higher amounts of whole-grain ingredients create processing problems. Pretreatment of the grain is a potential solution, but this increases costs. The hardness of whole grains can dull bread slicers, again increasing costs. Unless the consumer is clamoring for whole-grain products and willing to pay the premium, many manufacturers say, "Why bother?"

Despite the barriers to increasing whole-grain consumption, the science supports the importance of this effort. The food industry should think creatively about how to include whole grains in their products and how to clearly label whole-grain ingredients to make them easy for consumers to identify. If everyone does a little, no one needs to do a lot. It may be less interesting to reformulate foods to increase their whole-grain content, but it is more cost effective than bioengineering plant foods to increase phytochemical concentrations.

Small increases in the whole-grain content of foods—whether school lunches, fast foods, snacks, or processed foods—will have significant public health importance in the prevention of chronic disease. O

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